AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) A catalytically operating burner ~~having a catalyzer structure~~ mounted in a gas turbine system, the burner comprising:

a fuel injection device that injects fuel into a supplied gas stream that contains an oxidant;

a catalyzer structure that is arranged downstream from the fuel injection device, ~~and through which~~ the fuel/gas mixture or reaction mixture can flow, whereby a catalyst that initiates a combustion reaction of the reaction mixture is provided inside the catalyzer structure;

a stabilization zone that is arranged downstream from the catalyzer structure, and which changes into a final combustion zone in which the actual combustion reaction of the reaction mixture or a homogenous gas phase reaction takes place, wherein the hot combustion gases generated in the final combustion zone by the homogenous gas phase reaction can be fed to a downstream turbine;

a heat-resistant carrier material that forms the walls of several adjoining channels that pervade the catalyzer structure in a longitudinal direction and permit ~~a gaseous~~ the gaseous reaction mixture to flow through the catalyzer structure;

the walls being at least partially coated with ~~a catalyst~~ the catalyst;

the catalyzer structure having an inlet end and an outlet end, and communicating openings being constructed in the walls, through which the adjoining channels communicate with each other.

2. (Withdrawn) A burner as claimed in Claim 1, further comprising flow guidance means for redirecting at least part of the flow in one channel into an adjoining channel that communicates with the one channel via the communicating openings, the flow guidance means being associated with at least one of the communicating openings.

3. (Withdrawn) A burner as claimed in Claim 1, further comprising a turbulator associated with at least one of the communicating openings.

4. (Withdrawn) A burner as claimed in Claim 2, wherein the flow guidance means are constructed as a turbulator.

5. (Currently amended) A burner as claimed in Claim 1, wherein the channels form at least in part a winding flow path through the ~~catalyzer structure (4)~~ catalyzer structure.

6. (Original) A burner as claimed in Claim 1, wherein the walls are coated with the catalyst in such a way that some of the channels are catalytically active while other channels are catalytically inactive or inert.

7. (Original) A burner as claimed in Claim 1, wherein the walls are coated with the catalyst in such a way that at least some of the channels have at least one catalytically active zone and at least one catalytically inactive or inert zone in flow direction.

8. (Original) A burner as claimed in Claim 1, wherein the walls are coated with the catalyst in such a way that at least some of the channels have several active zones with differently designed catalytic activities in flow direction.

9. (Original) A burner as claimed in Claim 1, wherein at least part of the carrier material coated with the catalyst comprises a porous material.

10. (Original) A burner as claimed in Claim 1, wherein at least part of the carrier material coated with the catalyst comprises a woven fiber material.

11. (Original) A burner as claimed in Claim 1, wherein at least part of the carrier material coated with the catalyst comprises a metal foil.

12. (Withdrawn) A burner as claimed in Claim 1, further comprising turbulators in the channels, the turbulators being distributed in the channels along the catalyzer structure so that the catalyzer structure is provided in flow direction with at least one zone equipped with the turbulators as well as with a turbulators-free zone.

13. (Withdrawn) A burner as claimed in Claim 12, wherein one of the at least one zones equipped with the turbulators contains the outlet end of the catalyzer structure.

14. (Withdrawn) A burner as claimed in Claim 13, wherein the zone of the catalyzer structure containing the outlet end is constructed catalytically inactive or inert.

15. (Withdrawn) A burner as claimed in Claim 12, wherein one of the at least one zones equipped with the turbulators contains the inlet end of the catalyzer structure, whereby this zone is also constructed catalytically inactive or inert.

16. (Withdrawn) A burner as claimed in Claim 12, wherein a zone of the catalyzer structure containing the inlet end is equipped with turbulators and is constructed catalytically inactive or inert;

at least one catalytically active zone is constructed in an area between the inlet end and the outlet end of the catalyzer structure; and

a zone of the catalyzer structure containing the outlet end is equipped with turbulators and is constructed catalytically inactive or inert.

17. (Withdrawn) A burner as claimed in Claim 12, wherein a zone of the catalyzer structure containing the inlet end is equipped with turbulators and is constructed catalytically highly active;

a turbulators-free zone is constructed catalytically active in an area between the inlet end and the outlet end of the catalyzer structure; and

a zone of the catalyzer structure containing the outlet end is equipped with turbulators.

18. (Previously presented) A burner as claimed in Claim 1, wherein the carrier material comprises at least several layers, each layer being formed of a material web that has been at least one of folded and corrugated in zigzag or triangular or rectangular shape, the apex lines or apex surfaces of the folds, the waves, or both, in material webs that adjoin each other transversely to the flow direction are oriented differently, such that adjoining material webs rest against each other at the intersecting apex lines or apex surfaces and form channels between them.

19. (Original) A burner as claimed in Claim 18, wherein the apex lines or apex surfaces are oriented at an angle to the longitudinal direction of the catalyzer structure.

20. (Withdrawn) A burner as claimed in Claim 1, wherein the carrier material comprises a material web folded several times, wherein the apex lines or apex surfaces of the folds extend approximately in the longitudinal direction of the catalyzer structure, wherein planar wall sections are formed between consecutive apex lines or apex surfaces, wherein adjoining planar wall sections extend parallel to each other, and wherein the channels are formed between the adjoining wall sections.

21. (Withdrawn) A burner as claimed in Claim 1, wherein the flow guidance means, the turbulators, or both, in the walls are formed by triangular wings, wherein two triangle sides of the wing are cut free and wherein the wing is bent on the third triangle side in such a way that the wing projects into one of the channels, wherein the triangular openings created hereby in the walls form the communicating openings.

22. (Withdrawn) A burner as claimed in Claim 21, wherein the bent triangle side of the wing extends approximately transversely to the extension direction of the apex lines or apex surfaces of the material web, and that the triangle tip of the wing is pointed upstream.

23. (Withdrawn) A burner as claimed in Claim 1, wherein at least one of the channels is provided along the catalyzer structure at at least one point with a guide vane structure that is oriented transversely to the flow direction and that forces a stream flowing through it to rotate around an axis extending parallel to the flow direction.

24. (Currently amended) A process of using a catalyzer structure, comprising the steps of:

providing a catalyzer structure including a heat-resistant carrier material that forms the walls of several adjoining channels that pervade the catalyzer structure in the longitudinal direction of the catalyzer structure and enable that a gaseous reaction mixture flows through the catalyzer structure, wherein the walls are coated at least in part with a catalyst and wherein between an inlet end and an outlet end of the catalyzer structure communicating openings are constructed in the walls, through which the adjoining channels are communicating with each other, in a catalytically operating burner; and

flowing a gaseous reaction mixture through the catalyzer structure whereby the catalyst initiates a combustion reaction of the reaction mixture inside the catalyzer structure;

a stabilization zone being arranged downstream from the catalyzer structure, and which changes into a final combustion zone in which the actual combustion reaction of the reaction mixture or a homogenous gas phase reaction takes place, wherein the hot combustion gases generated in the final combustion zone by the homogenous gas phase reaction can be fed to a downstream turbine.